



THE SHIPPING INDUSTRY PERSPECTIVE: IMPLEMENTING THE STRATEGY

A CONFERENCE CONDUCTED AT THE
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**“Our Nation’s interests are
best served by fostering a
peaceful global system
comprised of interdependent
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information, law, people and
governance.”**

—“A Cooperative Strategy for 21st Century Seapower”



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FOREWORD



In October 2007 the Chiefs of the Maritime Services unveiled the “Cooperative Strategy for 21st Century Seapower.” This strategy relies on a broad range of maritime relationships and partnerships in the international community to achieve a more secure maritime environment. Evidence of successful implementation of the strategy can be seen by the establishment of the Southern Partnership Station by SOUTHCOM and the Africa Partnership Station by AFRICOM. These are efforts to create partnerships that build trust, establish information sharing protocols, coordinate humanitarian assistance and so on with the goal of creating a more secure and stable maritime environment. Further

evidence of this strategic implementation is the creation of new directorates in the CNO staff, including an international engagement sector, to better align the organization to the goals set out in the strategy. There is tremendous momentum in forming partnerships with other countries to achieve a “peaceful global system” but what about the industry that is considered the lifeblood of global commerce, the Maritime Shipping Industry?

On October 29, 2008, the Naval War College had the privilege of hosting several prominent representatives from a variety of sectors within the shipping industry to examine the landscape of the industry, to better understand the industry challenges and suggest potential benefits of forming a better relationship between the maritime services and the shipping community. This conference produced a report that points out that both the industry and the maritime services are motivated to work together and form partnerships that will enhance the nation’s ability to support the increasing demand on free trade and build a more secure maritime environment both at home and at sea. It makes sense.

The maritime strategy sets out to “advance the prosperity and security of our Nation” and there should be no doubt as to the significant role the shipping industry plays in both prosperity and security. This report highlights the need for a better understanding by government (including the maritime services), and also by the American public, of the shipping industry’s contribution to the nation’s economic viability. The report also suggests there is a need to better align government around the goals of free trade that allow our nation to compete in the rapidly changing global landscape.

Finally, the leadership of the maritime services should give careful consideration to some of the issues articulated in this report—for example, whether there is a need for a national strategy on infrastructure, or how U.S. accession to the UN Convention on the Law of the Sea might affect the U.S. ability to have “a seat at the table” and retain its natural global leadership position in ocean policy affairs. These are issues that draw upon the expertise of shipping industry leadership—people who are truly in a position to help inform policy makers on matters that support both the desire for global economic prosperity and homeland security.

A handwritten signature in black ink, appearing to read 'jpw' followed by a stylized flourish.

Rear Admiral James P. “Phil” Wisecup
President, U.S. Naval War College

REPORT ON THE “SHIPPING INDUSTRY PERSPECTIVE: IMPLEMENTING THE STRATEGY” EXECUTIVE SUMMARY

Overview: The nation’s maritime strategy, “A Cooperative Strategy for 21st Century Seapower,” recognizes that “Our Nation’s interests are best served by fostering a peaceful global system comprised of interdependent networks of trade, finance, information, law, people and governance.” Major vulnerabilities exist to this interdependent system. Military conflict, terrorist attacks, economic warfare and even natural disasters could disrupt the system and pose a risk to national security and the American way of life. As the maritime strategy acknowledges, “while defending our homeland and defeating adversaries in war remain the indisputable ends of seapower, it must be applied more broadly if it is to serve the national interest.”

To ensure this broader application of sea power, the maritime services must gain a better understanding of sea power in its temporary and emergent context. The shipping industry constitutes the virtual lifeblood of globalized commerce. This community operates throughout the world and has a global footprint far greater than the Navy and U.S. Coast Guard combined. It is international by nature and is the key enabler of world commerce and as such understands the value of, and relies on, maritime security.

This conference, held in the Naval War College’s Decision Support Center, used collaborative software to fully capture industry perspectives and promote in-depth exploration. Representatives included firms involved in shipping, port operations, maritime law, insurance, journalism, strategic planning, and risk assessment. Representatives from the Navy and Coast Guard headquarters, the Maritime Administration, the Global Maritime and Air Intelligence Integration Office of the Director of National Intelligence, the Naval Criminal Investigative Service, and faculty from the United States Merchant Marine Academy and Naval War College also participated.

This conference was designed to allow industry to speak and the College’s job was to



listen. It enabled the participants to highlight key issues decision makers need to address about the industry’s needs, future challenges, and (most important) the contribution of the maritime services to protect and contribute to free trade. This report describes industry views of how sea services contribute to the stability of global commerce and how they can better support the freedom of global maritime trade in the future.

Summary: One would be hard pressed to find an industry that is impacted by as many different stakeholders as the shipping industry. Individual countries, international organizations, international law, individual state laws and regulations, labor unions, environmentalists, OPEC, terrorists and pirates are among the forces that affect this industry; broad environmental, economic and demographic trends also shape industry performance. This is a highly complex operating environment. The industry therefore sees the need for leadership,

a strategy and a method of communication and coordination to address the present and future challenges.

The following are some key themes that emerged:

Vulnerabilities: Potential disruptions to the global system identified in this report include conflict in the Middle East, piracy, sea-mining, and terrorist activity, possibly using weapons of mass destruction. Participants were divided as to whether small boats or container ships would pose the greater threat of terrorist attack, but all agreed that a related risk to free trade would be over-reaction by governments to a perceived or real threat. They cautioned government decision makers to understand the need to balance security requirements and the need for free flow of goods. They recommended a risk based approach similar to the framework in the Security and Accountability for Every Port Act (SAFE). Given the amount of recent attention to piracy and terrorist threats, it was somewhat surprising that many participants felt the greatest potential threat to seagoing commerce was sea-mining. They considered mines a particular threat to shipping because they are “widely available, easily deployed, and difficult to detect and remove.” They also thought that the U.S. counter-mine capability is insufficient to meet this threat.

Leadership: A resilient and stable system will require more cooperative approaches when seeking to enhance the security and the viability of free and open trade. Unilateral efforts will be destabilizing. The United States should take this opportunity to play a leading role within the international community to craft solutions that optimize free trade and protect common interests. One key objective should be to design a “worldwide transportation strategy” that promotes cooperative solutions for the security challenges as well as standardizing regulatory policies to make a more efficient global system. Some conferees believed this leadership role will require restoring U.S. legitimacy within the international community and recommended ratifying the United Nations Convention on the Law of the Sea, which would both enhance the U.S. international standing and better position the country to protect its national interest.

Partnerships: Conferees also saw the need to improve partnerships at both the national and international levels. Within the U.S. there is a need to improve government and industry relationships to maintain the viability and competitiveness of the U.S. firms. Industry representatives argued that their concerns are often minimized or not well understood and yet will have significant strategic impact on the nation’s future success. Those issues include: the constraints of the Jones Act, lack of uniformity in regulations at the state and local level, and the absence of coordinated planning for investment by both the public and private sectors. The participants cautioned that the nation’s port capacity and infrastructure will not be able to meet the demand in the near future and there is a need to adopt what one participant called a “national infrastructure strategy.” That strategy should aim to improve port productivity, upgrade the intermodal transport system, provide security systems designed to both protect and make efficient the movement of goods and finally have built in redundancy to maintain the movement of essential goods in the event of a terrorist attack or natural disaster. At the international level, they favored a “global cooperative partnership” among industry, law enforcement, government and the military.

Role of Maritime Services: Industry representatives argued that the Navy’s primary role is to maintain the free flow of goods at sea with global forward presence, including the Arctic region. They recommended that the Navy maintain the capability to counter potential challenges from peer competitors and expand its counter-mine capability. They urged the Coast Guard to continue strengthening cooperation with the national and international shipping communities and to work more forcefully to eliminate inconsistency in regulation. They also cited the need for more resources for the Coast Guard. They emphasized the

need to maintain investment in ships and personnel for the U.S. Merchant Marine to ensure adequate capabilities for DOD needs. They also noted that measures to increase short sea shipping would alleviate the growing stress on U.S. land transportation, and they advocated an enhanced role for the Maritime Administration (MARAD).

Conclusion: Robert Kaplan’s recent article in *Foreign Affairs* contends that “the Indian Ocean—the world’s third-largest body of water—already forms center stage for the challenges of the twenty-first century.” Many of the conferees would agree with Kaplan that free trade at sea will become increasingly more challenged in the future. CTF 151 was established as a coalition of the international navies to bring about a cooperative solution to piracy. This is an example of the cooperative solutions recommended in this report. The United States maritime services’ cooperating with regional and global partners is a legitimate means to mitigate the risk of global disruption. The question going forward is what other challenges might this approach be effective in countering? Proliferation, mining, disaster relief?

The need for leadership and cooperation was a prominent theme throughout the conference. Participants viewed this need as an opportunity for the maritime services to play a leading role in addressing challenges. They urged government to strengthen its dialogue with industry and stressed the importance of improving public understanding of the critical role the shipping industry provides in supporting the American way of life.

—Captain Mike Sherlock, Project Director



Acknowledgments

The objective of this conference was to gain shipping industry perspective on a wide variety of issues affecting the very complex system of maritime commerce and security. To do so we sought out a diverse group of prominent *industry representatives* to cover the range of issues affecting the industry. We extend our thanks to those participants who took time out of their busy schedule to offer their perspective. We are also grateful to those *government participants* whose role was to help listen and add depth to the discussion in their area of expertise. A special thanks to Dr. Lawrence Modisett for keeping us on task and on time throughout the day as moderator. This project would not have been possible without the dedicated efforts of the project team of CDR Dave Welch, Ms. Charlene Bary-Ingerson and Mr. Gregg Hoffman for their expertise and guidance in using the Decision Support Center and WebIQ® tools that allowed us to capture many key issues in a one day event. Finally, a special thanks to our partners at the U.S. Merchant Marine Academy, Capt. John Hanus and Brian Holden, for their role in making this a successful project.

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THE SHIPPING INDUSTRY PERSPECTIVE: IMPLEMENTING THE STRATEGY



By Professor Lawrence Modisett

On 29 October 2008, the Center for Naval Warfare Studies (CNWS) at the Naval War College sponsored a one-day conference entitled “The Shipping Industry Perspective: Implementing the Strategy.” The three goals of the conference, as stated at the outset by the Dean of CNWS, Professor Barney Rubel, were to “gain industry perspective on your future, better define the maritime services’ role in your

success, and develop a better Navy understanding of how the shipping industry views and values sea service activities.” The CNWS sponsors also advised participants that insights from the conference would be used to help guide the implementation and execution of the new maritime strategy to promote global security and prosperity.

The 36 participants included representatives of firms engaged in shipping, port operations, maritime law, insurance, journalism, strategic planning and risk assessment. Also present were representatives from Navy and Coast Guard headquarters, the Maritime Administration, the Global Maritime and Air Intelligence Integration Office of the Director of National Intelligence, the Naval Criminal Investigative Service, and faculty from the United States Merchant Marine Academy and Naval War College.

The conference employed a variety of formats. The morning consisted of four briefings: Global Trends in the Commercial Maritime Sector, Commercial Carriers, Port Operations, and Maritime Security, each followed by questions and discussion. The afternoon consisted of moderator-led discussions of issues raised by the morning briefings, a series of scenario-building exercises to identify a range of possible futures, and a discussion of actions needed to ensure as positive a future as possible, including the role and value of the maritime forces. Throughout the day, participants used a collaborative software tool called WebIQ® to enter ideas, comment on one another’s entries, and prioritize among alternatives. Participants were advised that all remarks and comments made during the course of the day would be on a non-attribution basis.

BRIEFINGS AND DISCUSSION: GLOBAL TRENDS

The first briefer, a senior representative of the shipping industry, addressed “global trends in the commercial maritime sector.” He suggested a number of significant changes the future might bring, including:

- Larger, faster ships with smaller crews and more public ownership;
- A “flag neutral fleet,” with fewer ships flying the flags of traditional maritime nations and a consolidation among “flags of necessity”;
- Fewer seafarers from traditional maritime nations, more stringent training and language requirements, and stricter reviews of mariners by port states;
- Increased flag state influence, due to the rising status of developing nations, leading to greater cooperation at the international level as the dominance of traditional maritime nations diminishes;

- Changing trade patterns as global manufacturing becomes more evenly distributed, shipping costs for raw materials decrease, and rising costs of land transportation make short sea shipping more competitive;
- Stricter maritime environmental controls and enforcement, with particular attention to the opening Arctic region and increased public oversight; and
- A relatively greater threat to homeland security from small craft as large commercial ships become subject to greater monitoring.

In the ensuing discussion and WebIQ® entries, participants expressed a range of views on these points. Some believed ship size would be limited by port capacity, with one suggesting tanker sizes are already close to the maximum port facilities will allow for the next decade or so. Another predicted the size of ships would increase until it reached the practical limits of low-speed diesel single-shaft propulsion systems, the maximum being some 18,000 to 20,000 TEU [twenty-foot equivalent units].¹ There was no disagreement that crews will continue to become smaller. Several noted the problem shipowners face in finding and recruiting qualified mariners, and one commented the shortage has created a demand for U.S. seamen among non-U.S. shippers, despite the higher cost of employing them.

The issue of flagging attracted a number of comments. Some participants believed the number of flagging nations would diminish as competition favored the larger and more efficient. However, one participant commented that the U.S. and other countries would protect their flag for coastal trade and sensitive cargo, such as Department of Defense (DOD) cargo on U.S.-flag ships. This led to a discussion of the implications of the dependence of the U.S.-flag international fleet upon DOD for its survival. Several participants warned this dependence would eventually result in the disappearance of the U.S.-flag international fleet. Recommended remedies included providing government incentives other than subsidies, such as tax incentives, as the UK does, and partnering with international companies to provide more commercial cargo.

Several participants discussed the impact on international cooperation of the consolidation of flag countries. One suggested that business interests, rather than the common good, were influencing the behavior of the largest flagging nations in the International Maritime Organization (IMO). Others, however, responded that business interests coincided with the facilitation of commerce, and leading flag nations were among the first to ratify and enforce international agreements. Participants also noted that despite its relatively small size as a flagging nation, the U.S. retains significant influence in the IMO (International Maritime Organization), although the European Union, voting as a bloc, could challenge it. Participants also saw U.S. influence benefiting because Liberia and Marshall Island flags are essentially “US institutions” that operate from the U.S., align closely with U.S. positions, and “maintain close relations with the US Government.”

Participants also commented on the speaker’s thoughts about changing trade patterns, offering the following observations:

- Future trade patterns will depend a lot on how much Asian manufacturing shifts away from China in search of lower production costs; some analysts expect China to retain much of its market share by shifting production to cheaper inland locations.
- The overcrowding of choke points such as the Straits of Malacca and Singapore may limit the growth of international traffic.
- The relatively low percentage of trade currently moving in containers in developing countries will provide an impetus for future growth in container shipping.
- U.S. short sea shipping will remain at a competitive disadvantage to land transportation as long as the Jones Act remains in force.

¹ A list of acronyms used during the conference and their definitions appears at the end of this report.

Several comments dealt with the implications of the opening of the Arctic:

- The unpredictability of Arctic weather and current lack of charts might deter shippers from using Arctic routes, despite the distance they would save.
- For those willing to brave the Arctic, the Northern Sea Route over Russia or a Trans-polar Route across the North Pole would be shorter and more attractive than the North-west Passage.
- Russia has a significant advantage over other countries in the number of ice-class vessels in its merchant fleet, while the U.S. is at a disadvantage.

Environmental concerns also attracted comment. Participants speculated that attention to this issue would increase regardless of which party won the U.S. elections. They cited complications arising from the propagation of environmental regulations by multiple jurisdictions, focusing particular attention on the port of LA–Long Beach.

Of all the issues raised by the first briefer, questions about security stimulated the most responses. Recommendations for dealing with threats from small boats included using Singapore's Harbour Craft Transponder System (HARTS) as a model; identifying vulnerabilities by analyzing networks used by smugglers, terrorists, proliferators and other transnational criminals; working with the insurance industry to set up a cell phone network for tracking small boat traffic; and tracking people rather than cargo.

Although the speaker highlighted the threat from small boats, most of the comments on security issues dealt with the threat posed by container vessels, particularly the relative merits of scanning versus screening. There appeared to be a general consensus that neither method alone can guarantee 100 percent inspection of all cargos, that some combination of the two is needed, and that any strategy must take into account the commercial impact of security requirements. The following WebIQ[®] exchange among participants illustrates these points:

100% scanning undermines the risk based approach that the international community has agreed to in the SAFE [Security and Accountability for Every Port Act] framework (and we represented to our partners we would follow so our trust factor went down on this one), eliminates any potential value in joining AEO [Authorized Economic Operator] programs in the SAFE framework such as C-TPAT [Customs-Trade Partnership Against Terrorism] (which CBP [U.S. Customs and Border Protection] will tell you is a critical component of their success) and is potentially very disruptive to trade. 100% scanning sets back national security a good bit.

Agreed—effective risk-based targeting is the only effective way to ensure effective utilization of security assets while preserving integrity of trade.

The flip side is that if a WMD [weapon of mass destruction] or other item makes it aboard a ship bound for the USA, we have already lost.

Good point and a basis for the strategies of CSI [Container Security Initiative], C-TPAT, ATS [Automated Targeting System], SFI [Secure Freight Initiative] and 10+2.² Intel is the answer.

² Proposed new U.S. Customs requirements for additional information to be provided by shippers prior to loading containers for shipment to the U.S.

Several comments addressed the role of the Navy and Coast Guard. Participants acknowledged the impossibility of maintaining a physical presence wherever terrorism or piracy might pose a threat. Instead, one recommended the Navy use its sensor technologies and screening capability to provide situational awareness.

BRIEFINGS AND DISCUSSION: COMMERCIAL CARRIERS

The second briefer, the global manager for marine transportation of a major oil company, offered projections of the demand for energy and the supply of vessels and identified key challenges affecting the efficiency, quality and security of commercial shipping. Key points included the following:

- Fuel demand for global marine transportation is expected to grow at an annual rate of 2.6 percent through 2030;
- Global fleet size is expected to increase by 48 percent between 2007 and 2011, or approximately 8 percent annually, then level off through 2014;
- From 2002 through 2006, U.S. port calls increased by 4–5 percent annually, a trend that is causing increasing congestion;
- Between 2000 and 2008, the global shortage of merchant marine officers increased from 16,000 to 84,000, causing wages and operating costs to go up;
- Piracy has become a significant security issue.

The discussion and WebIQ® entries accompanying this brief focused heavily on the challenge of piracy. Views differed over the seriousness of the threat, but some military participants noted the level of concern being expressed by participants from the private sector was higher than they had heard previously. Participants noted that while the percentage of vessels attacked remained small, the range, sophistication and frequency of attacks have been increasing, particularly in the Gulf of Aden, along with the size of the ships targeted and the amount of the ransoms being paid.



Participants cited various obstacles to effective naval action against piracy. These included insufficient numbers of platforms to ensure timely responses, questions regarding the authority of military forces to engage in what some viewed as essentially a police

action, inadequate coordination among the numerous organizations attempting to combat piracy (“We need a 911 number”), and the politically challenging issue of what to do with captured pirates when few governments are willing to submit them to the jurisdiction of national courts.

Nonetheless, participants suggested a number of possible remedies. These included greater international coordination, which some credited with reducing the incidence of piracy in Southeast Asia; increased presence, such as the current deployment of NATO vessels off the coast of Somalia; and better preparation of commercial ships with non-lethal defensive capabilities such as improved lighting, crew training, extra watches, readied fire hoses, and Long Range Acoustic Devices (LRAD). Several noted that political and economic measures are needed to deal with the root causes of piracy, as military and police action can only address the symptoms. One argued it would not be possible to end all piracy emanating from Somalia, but it could be eliminated from the strategic waterways of the Gulf of Aden and confined to Somalia’s littoral waters.

Several participants recommended a follow-up conference devoted exclusively to the issue of piracy, noting that meetings like this one can be very effective in revealing and closing the gap between DOD/DHS perspectives and those of industry.

While piracy drew the most attention from participants during this session, they also offered observations on problems posed by port congestion, which the briefer believed to be a greater long-term concern. Participants noted that a major cause of the problem is lower productivity in U.S. ports than those abroad, with one asserting “international container port productivity . . . is on the order of 4 to 1 better . . . as compared to the best North American port.” Participants attributed this to higher U.S. labor costs and lack of investment in infrastructure. One also decried the absence of an infrastructure strategy at the national level, with investment instead determined “piecemeal,” state by state and locality by locality. Participants also noted the problems posed by increasing congestion of coastal waterways and the interstate routes serving major ports.

BRIEFINGS AND DISCUSSION: PORT OPERATIONS

The third briefer, a senior executive in an international port management firm, expanded upon the challenges facing port operators. These included:

- Worldwide capacity shortfalls;
- Physical constraints in handling larger vessels;
- Automation requirements and labor agreements;
- Increased environmental restrictions; and
- Increased costs of developing new terminal capacity.



The speaker cited data showing that annual increases in container traffic from 1990 through 2007 were 3 or 4 times as great as increases in global GDP. He also cited a 2007 estimate that projected annual growth in container traffic through 2012 at 9.8 percent. This growth is putting particularly heavy pressure on capacity in fast-growing regions of Asia and the Middle East. Capacity utilization across all regions is currently about 80 percent, with the “practical maximum” being about 85 percent. By 2012, estimated capacity

utilization will exceed 85 percent in the Western Hemisphere, and demand will exceed 100 percent of capacity in Asia, Africa and the Middle East.

The briefer also cited developments likely to pose particular challenges to port capacity on the East Coast: diversion of imports from the West Coast due to rising congestion and costs at Los Angeles/Long Beach; significantly higher volume and larger vessels by 2015 as a result of the Panama Canal expansion; increased environmental restrictions; and increased costs of developing new terminal capacity. He offered the following recommendations:

- Maximize the efficiency and capacity of existing facilities before engaging in new developments, through more innovative port design and increased intermodal usage.
- Convert on-dock terminals from “container storage locations” to “buffering zones” so containers move off-dock within hours, not days or weeks.
- Undertake a combined effort by major stakeholders (ports, cargo interests, shipping lines, truckers, railroads, and logistics service providers) to create regional logistics centers.
- Develop a “Plan for Panama.”

Responding to the briefing, participants focused first on the respective roles of the public and private sectors. Some suggested that at the Port Authority level the role of the public sector should be to plan infrastructure, while the private sector undertook to fund, build and operate it. At the national level, government should develop a “national infrastructure strategy,” one element of which might be to identify “strategic ports” on which to concentrate development efforts. One participant commented that a key to port infrastructure funding will be the coming reauthorization of the highway bill, which could set national policy on attracting private capital to port investment. Several participants noted that the nascent Global Maritime Partnership (GMP) would provide a useful forum for dialogue between the public and private sectors and recommended preparations for the GMP devote greater attention to this aspect.

Discussing challenges to upgrading port capacity, participants focused on environmental regulations, the relatively high cost of U.S. labor, and public disagreement over waterfront land use, such as the preference for residential condominiums over industrial facilities. One measure cited as a means of addressing environmental concerns was “cold ironing,” which reduces air emissions from docked ships by using land-based energy sources. Some participants qualified this recommendation by noting that tanker ships need onboard energy to pump their cargos.

Several participants advocated expanded use of “Agile Port System” technology to increase the capacity of existing facilities. Participants noted, however, that any gains from increased port capacity would be limited unless accompanied by increased intermodal capabilities. One important step toward this end would be improved coordination of trucking, railroads and short sea transport.

Some participants called for relaxing restrictions on foreign investment and management of U.S. ports. They noted that will require clearer public and Congressional understanding of the delineation between terminal operations and port security, with assurances that the latter will remain a function of local, state and national government.

Comments by the briefer on his company’s efforts in the area of security elicited a number of comments from participants, particularly on cargo scanning. While some believed 100 percent scanning is possible, others questioned the technical feasibility, and some also noted that time and personnel constraints would limit the ability to exploit the

data collected. Participants seemed in agreement that if the U.S. requires 100 percent pre-embarkation scanning of cargos destined to come here, other countries will demand reciprocity. Several felt this would not be a bad thing, given global security needs.

Participants also noted efforts underway to develop monitors that would be embedded in containers and transmit information on location, access and potential problems such as radiation. To be economically feasible, such monitors must have very high reliability, as the cost of false positives would be significant.



Participants cited the need to focus not only on prevention but on recovery and resiliency in the event of a successful terrorist attack or other major blow to shipping capacity. One noted that the National Strategy for Maritime Security addresses consequence management and recovery for the marine transportation system, but another contended that Congress has not yet fully embraced this concept.

BRIEFINGS AND DISCUSSION: SECURITY

The fourth and final briefer was the chief security officer of a major Pacific shipping company who spoke on “Industry Roles and Capabilities for Maritime Homeland Security.” He provided examples of past incidents that revealed the vulnerability of commercial and military shipping, discussed the potential economic impact, and noted the magnitude of the task of providing security for the 7,500 foreign ships and 6 million cargo containers that enter the U.S. each year. He noted that not only are commercial cargos at stake, but also the critical ability to move military equipment through U.S. ports and merchant ships.

Vulnerabilities include the possible use of containers to conceal contraband, human as well as material; heavy U.S. dependence on port facilities in Los Angeles/Long Beach, through which the country receives 30 percent (by value) of its imports; and the difficulty of rerouting shipments that require specialized port facilities. The speaker also cited the danger of terrorists hijacking a ship and using it to strike vulnerable targets, as commercial airliners were hijacked and used on 9/11. He noted that in the event of an attack on a port, U.S. authorities would face a dilemma. Security concerns would argue strongly for closing all ports as a precaution against another attack, but the costs of a long closure would be staggering. As an example, he cited a report that the 11-day work stoppage in West Coast ports in 2002 entailed costs totaling over \$15.5 billion.

The briefer viewed small boat attacks as the most likely threat to shipping and noted that a typical merchant ship carries a crew of just 21, none of whom are heavily trained or equipped to defend the vessel. He also noted that most shore facilities lack security forces robust enough to resist a determined attack.

Addressing measures underway to counter these threats, the speaker outlined key provisions of the Maritime Transportation Security Act of 2002 (MTSA), the Security and Accountability for Every Port Act of 2006 (SAFE), and the Transportation Worker Identification Credential (TWIC) program. To address the challenge of coordinating efforts among the numerous official and private organizations involved, he cited the Customs-Trade Partnership Against Terrorism (C-TPAT), the National Incident Management System (NIMS), and the Incident Command System (ICS). He also alluded to the role of scanning and “smart boxes” in advancing container security.

The briefing prompted discussion on a number of issues. One was whether armed security personnel should be added to the crews of merchant ships. This option did not appear to have the support of many shipping industry participants, who cited the cost and a general reluctance to have firearms on board, particularly in the case of tankers. Singapore’s HARTS system was again cited as a possible response to the small boat threat.

Participants also returned to the topic of container security. Echoing earlier comments, one noted that U.S. Customs and Border Protection (CBP) currently screens 100 percent of incoming containers, checking information on origin and contents, but has stated that it is not physically or economically feasible at this time to attempt 100 percent scanning or physical inspections. While some participants expressed concern over cost, particularly the expense of inspecting returning empties, others appeared more sanguine. One estimated the “security” cost at \$100 per container, “in relative terms . . . a small amount,” though he did not specify precisely what regimen of screening and scanning he had in mind. Another noted that one scanning tool, tamper-resistant embedded control devices (TREC), would enhance productivity as well as security, since they would not only warn against dangerous contents but also provide shippers and customers real-time information on the container’s location. One participant cited a need for better integration of information collected from radiation and X-ray monitoring in “first” (overseas) and “second” (mainland U.S.) lines of defense.

Along with security issues, the briefing prompted some discussion of the mission of the U.S. Merchant Marine, since the briefer had stressed its importance to military logistics. Participants noted the U.S.-flag commercial fleet not only provides most of the hulls for military shipments but is also the manpower pool for the government reserve fleet. One participant asserted that the principal reason for maintaining a U.S.-flag commercial fleet is not economic but ensuring the availability of reliable carriers for “essential DOD cargos.”

PETER SCHWARTZ ON “MENTAL MAPS”

As an introduction to the afternoon session, participants watched part of a filmed address by Peter Schwartz of Global Business Network, presented at the Naval War College in May 2007 in conjunction with the development of the new Maritime Strategy for the Chief of Naval Operations. Discussing the critical importance of being open to new ideas when thinking about the future, Mr. Schwartz cited two historical examples. The first, an error on early maps of the New World that showed California to be an island, persisted for over a century despite updated accounts from numerous explorers and missionaries and even a royal edict by the King of Spain. Mr. Schwartz’s point was that once a false idea becomes implanted in our minds, it is very difficult to change that idea. The second example was IBM’s decision early in the 1980s not to develop its own operating system for personal computers, based on an erroneous projection that greatly underestimated the future market. This example showed that taking too narrow a view of the range of future possibilities can entail huge costs and threaten the survival of even a large and powerful organization.

ISSUES, ASSUMPTIONS AND UNKNOWNNS



With Schwartz's admonitions as a starting point, participants embarked upon a series of exercises and discussions designed to help them think as broadly as possible about what the future might bring to the shipping industry, what could be done to ensure future developments were as favorable as possible, and what role the maritime services might play.

Participants were first asked to reflect upon the morning's briefings and discussions and identify major issues facing the commercial shipping sector through 2015, key assumptions underlying current thinking, and unknowns the maritime industries may need to confront. While there was some blurring of the lines between categories, recurring topics included the following:

U.S. needs a national strategy on infrastructure. Participants concurred in the need for a national strategy on infrastructure that would be set by Congress but recognize state and local interests. Such a strategy should encourage private investment. Participants agreed the upcoming reauthorization of the highway bill would provide a good opportunity to define this strategy. Several stressed that the reauthorization bill should address freight transport more specifically than past legislation has done. Participants also called for efforts to increase public awareness of the growing shortfall in U.S. maritime infrastructure, which one characterized as a "calamity."

Diverse security threats require coordinated action. Participants stressed the importance of cooperation among nations and between the public and private sectors in dealing with the diverse threats facing maritime commerce. One participant cited in particular the need for a coordinated global strategy to deal with piracy, emphasizing law enforcement rather than military solutions and focusing on the "end game"—prosecution of those apprehended. Participants also noted the need to prepare for recovery from a possible catastrophic loss and cautioned against assuming future security threats will be similar to those already experienced.

Future trade growth subject to many variables. The majority of "unknowns" cited by participants related to the future of global trade, with some questioning the assumption of continued growth. A number of comments focused on the uncertain global political climate. Participants warned that the relatively cooperative current environment, which is conducive to continued globalization, could change. A more confrontational world characterized by greater tension among the major powers could lead to protectionism, greater competition for energy resources, and other forms of economic nationalism. Participants also noted several non-political constraints that might restrict the future growth of trade. These included limits on infrastructure, particularly in India; increased energy prices; burdensome environmental regulations; and increased domestic demand in Brazil, Russia, India and China that could compete with exports.

THREATS AND OPPORTUNITIES



Participants were next asked to identify threats and opportunities maritime commerce might face over the next twenty years. Potential threats took many forms, including physical attacks, economic challenges, natural disasters, and even psychological vulnerabilities.

Participants foresaw a wide range of potential threats in the area of physical security. In keeping with the morning's discussion, piracy and terrorism led the list. Continued piracy would lead to disrupted trade routes and higher insurance rates. Terrorism could take many forms, ranging from small-scale attacks using conventional means to WMD, which could be biological, chemical or a dirty bomb. One participant suggested WMD might be smuggled aboard an intercoastal vessel. The possibility of attacks aimed at inflicting environmental damage was also noted.

Participants also foresaw possible threats at the international level. A conflict in the Middle East could topple one or more states and disrupt energy exports, and they did not exclude the possible rise of a near-peer challenger to the U.S. or even a global war.

A less direct threat arising from the uncertain security environment would be governments over-reacting to potential threats in ways that would "destroy the open trading system." In raising this possibility, a participant cited the 2020 project of the National Intelligence Council (NIC) that characterized one possible alternative future as dominated by "pervasive fear."³ Damaging responses could include security measures that would stifle free trade and excessive diversion of resources to counter terrorism.

Participants also foresaw a wide range of potential economic threats. Some of these were relatively specific, including tightened credit markets preventing needed investment in infrastructure; budget deficits that would limit U.S. ability to deal with maritime threats and challenges; restraints on foreign investment in the U.S.; over-emphasis on government spending versus private-sector incentives; proliferation of national and international environmental controls; disruptive strikes; over-reliance by the U.S. on foreign shipping; increasing national claims on the "commons"; and a "collapse" of the worldwide

³ Available online at http://www.dni.gov/nic/NIC_globaltrend2020_s4.html#scen.

web. One participant noted that even the opening of Arctic trade routes would “threaten the status quo” of the global port and shipping industries.

More general economic threats included a dramatic decrease in world trade; rising commodity prices affecting the availability of food; a global recession or even a depression; protectionism; and international crime, including illegal trafficking in people, weapons, drugs, counterfeit goods and other contraband. Participants noted that several of these developments would bring political instability as well.

Along with man-made threats, the list included natural disasters such as floods, earthquakes, hurricanes, pandemics (also possible as a result of terrorism) and climate change. Possible results of climate change included increased ocean levels, desertification, famine, and disease.⁴

The range of perceived threats also included psychological risk. As noted above, one participant cited the NIC 2020 project’s fictional scenario, “Cycle of Fear.” Others saw potential threats in an excess of complacency, a “lack of imagination,” and a “general lack of understanding of the significance of the maritime domain to [U.S.] national and economic security.”

Most of the potential opportunities foreseen by participants were economic and again tended to be either very specific or very general. The opening of the Arctic, despite the disruptive effects noted above, was seen overall to offer promising prospects, including shortened transit times and new energy sources, which in turn would benefit the tanker industry. One participant noted that Arctic routes would also have a positive effect on security by providing an alternative to sea lanes currently plagued by piracy.

Participants foresaw a number of benefits the future might bring to the shipping industry, including an increase in trained mariners, the implementation of container security, creation of a recovery plan to restore port productivity after a natural or man-made disaster, greater collaboration between the U.S. government and the maritime industry to enhance security and commerce, and a “worldwide cargo and transportation strategy” designed by the U.S. and its trading partners.

Participants also saw potential opportunities in technology, including breakthroughs in clean energy production, carbon sequestration and desalinization. They predicted the increased use of technology would increase efficiency, although one characterized advancements in information systems as “both a threat and an opportunity.”

On a more general level, participants foresaw the possibility of continued increases in the world’s standard of living “lifting hundreds of millions out of poverty.” One suggested the economic benefits of increased global trade would reduce the recruiting base for terrorists. Continued development in the “BRIC” countries (Brazil, Russia, India and China) would increase the demand for global shipping, and a developing Africa could also be a source of opportunity. Participants anticipated a greater interest by private investors in building and operating infrastructure, better cooperation between the public and private spheres domestically and internationally, and a higher proportion of U.S. resources going to improved living standards. Several foresaw a higher level of international cooperation, including a suggestion that the maritime services lead in developing a “global cooperative partnership among industry, law enforcement, government, and the military.”

⁴ Participants occasionally leavened an otherwise sober discussion with injections of humor. When one commented on WebIQ®, “Think of what the impact on our ports might be if the ocean levels rose 10 feet,” another responded, “Increased draft capabilities?”

BUILDING ALTERNATIVE FUTURES: KEY VARIABLES

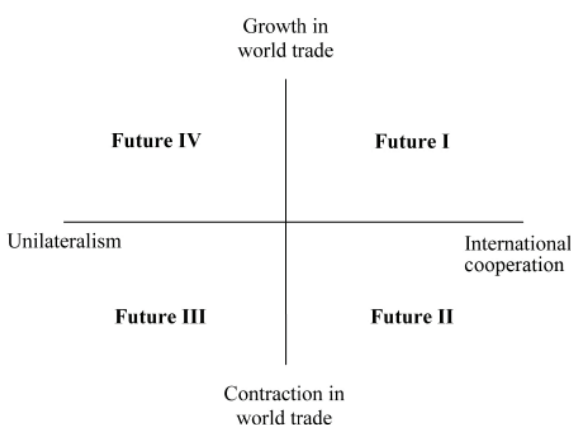
Participants now began a series of exercises designed to create and characterize four alternative futures. These exercises followed a methodology that has been employed in a wide range of strategic planning projects at the Naval War College and is frequently used in the corporate world. It does not seek to predict what the real future will look like, but to capture as many as possible of the diverse features that might go into it. The intent is to expand the boundaries of existing “mental maps” and consider a broad spectrum of possibilities. The resulting insights provide a firmer basis for determining how to hedge against risk and shape developments in a positive way.

In the first exercise, participants were asked to identify key variables that would shape maritime commerce over the next twenty years. In keeping with Schwartz’s admonition, they adopted a wide-ranging perspective and generated over 100 possibilities—political, economic, environmental, technological and security-related. Participants then reviewed and consolidated the products of their brainstorming. They eliminated duplicates, discussed which of several related variables would be dominant and which would be dependent, and made sure those remaining were true variables whose outcomes were not predetermined.

From the consolidated list, participants were then asked to select the two variables they believed would have the most impact on the future of maritime commerce. After discussion, they agreed the two variables that would have the most influence would be whether world trade grew or contracted and whether the international order moved in the direction of cooperation or unilateralism.

BUILDING ALTERNATIVE FUTURES: FOUR FUTURES

With these two key variables identified, the next step was to create a matrix consisting of two axes and four quadrants, with each axis representing one variable. The ends of the horizontal axis were labeled “unilateralism” and “international cooperation,” and the ends of the vertical axis were labeled “growth in world trade” and “contraction in world trade.” The four quadrants were provisionally labeled “Future I,” “Future II,” “Future III” and “Future IV”:



Having established this basic model for the four alternative futures, participants were asked to consider in greater detail what each might look like. For this exercise, they were asked to imagine themselves as future editors and to enter headlines in WebIQ® showing positive and negative developments that each of the four futures might bring. The

headlines could relate directly to maritime commerce or to developments having a major impact on it, such as changes in the cost and availability of energy.

Not surprisingly, most developments foreseen for Future I were positive—peace, prosperity, soaring stock markets and greater international cooperation in governing and regulating trade. One exception was a prediction that the gap between “haves” and “have-nots” would reach an all-time high. Participants also foresaw challenges for the shipping industry amid the general prosperity. These included inadequate capacity at U.S. terminals to handle the volume of imports; a continued tendency by shipowners to over-order new vessels, resulting in a rate collapse; and a shortage of skilled labor. Several participants predicted consolidation of the shipping industry through multiple mergers.

Entries for Future II included possible explanations for the global downturn. These included resource constraints, including those resulting from environmental concerns; over-regulation of maritime industries; and even a collapse of the worldwide web. Effects of the downturn, which some saw reaching the depth of a global depression, included a lack of work that would lead unions to request half-days and shared jobs; a shortage of credit as banks hoarded cash; a U.S. fall from first to fifth place in trade volume; and a movement by carriers from Los Angeles/Long Beach to Mexico, resulting in a 50 percent loss of volume. While some participants envisioned cooperation at the global level to deal with the crisis, including one prediction of a single “world order,” others foresaw a trend toward regionalization. One participant believed this would result from shortened supply chains, perhaps due to a global capping system for carbon-based products. Another attributed it to rising transportation costs.⁵ One predicted an attempt to establish a UN-controlled global shipping enterprise would fail.

Just as the predictions for Future I were the most positive, those for Future III were the bleakest. Several participants foresaw armed conflict, including “World War III,” with several citing competition for resources as the likely cause. Participants differed in how the relative positions of the major nations would be affected. One predicted a period of U.S. hegemony, buttressed by “physical power” and a unilateral repudiation of debts. Complementing this view, some saw China and India weakened by economic failure and instability. On the other hand, another participant predicted China would sell its U.S. dollar holdings and that the renminbi (RMB) would become the pricing currency for oil. U.S. imports would fall, and Japan would ask the U.S. to remove its bases from the islands. One participant foresaw the U.S. closing its borders and prohibiting the export of any type of jobs. Others predicted soaring prices, and one (not the same participant who made this prediction for Future I) warned that the gap between haves and have-nots would increase, creating a “breeding ground” for local and global terrorism. On the shipping front, one participant saw the world’s commercial fleet lying idle, and another predicted the U.S. would create a new shipping line of its own.

In addressing Future IV, some participants questioned its credibility. One argued it would be impossible to have growth in world trade if states pursued unilateralist policies. Another, however, saw a historical precedent and labeled this future the “age of the neo-mercantilists.” Several believed Future IV would manifest itself in the formation of tight regional blocs, each dominated by one hegemonic state. One participant identified these potential blocs as North America, South America, Europe and the Mediterranean, Southeast Asia, Northeast Asia, and the Gulf Cooperation Council.

As in Future III, participants foresaw competition for resources, including Arctic oil and gas, leading to armed clashes, and they again addressed possible effects on the

⁵ The author of this entry did not explain why transportation costs might rise during a global economic downturn, but in the context of the discussion, he may have envisioned a reduction in energy production due to environmental controls or attempts by producers to maintain prices above a certain level.



balance of power among major states. This time, there appeared to be greater agreement that China would benefit vis-à-vis the U.S. One participant predicted China would seize Taiwan while the U.S. “stands by.” Another foresaw the West “held hostage” to a Russia-China pact, although a contrasting view predicted the Group of Eight would prosper as the rest of the world grew poorer. One participant expected to see clashes in the Indian Ocean between the Chinese and Indian navies.

With the exception of one prediction that a U.S.-led trade bloc would be strengthened by falling barriers within the region, participants expected the U.S. position to decline. One even described Future IV as “how the U.S. became a developing economy.” In response to its challenges, participants foresaw the U.S. taking strong measures. Examples included subsidizing exports, reenacting the Smoot-Hawley Tariff (which would be followed by the stock market plunging to a “new low”), and even “taking control of foreign tonnage.” One foresaw other nations following a long-standing U.S. example, with the “Jones Act replicated across the world.” And in a comment presumably aimed at U.S. cutbacks during the period leading up to Future IV, one headline announced “Congress debates increasing to a 100 ship Navy.”

To complete the futures-building process and help bring each of the four alternatives into sharper focus, participants were asked to think of “bumper stickers” that would provide a summary description of each in a few words. The most popular name for Future I was “Free Trade Rules!” Runners-up included “Rising Tide Lifts All Boats” and, perhaps inevitably, “Sing Kumbaya!” For Future II, the name that got the most votes was “Misery Loves Company,” closely followed by “United We Fall” and, not so closely, “We Thought This Was Supposed To Work.” For Future III, the plurality went to “Go Small, Stay Home,” and for Future IV, participants chose “My Way Is the Highway,” closely followed by “Greed Is Good” and “Regionalism Takes Hold.”

HOW TO GET THERE

Having envisioned four alternative futures that collectively embodied a broad range of desirable and undesirable outcomes, participants turned their attention to what could be done to maximize the prospects for a positive future and minimize the likelihood of a negative one. They again used WebIQ® as a brainstorming tool, then discussed the results.



Many of the participants’ comments, including those voiced most strongly, focused upon the relationship between the public and private sectors, with several stressing that government must listen to the private sector as part of a government-industry “partnership.” A recurrent point was the need to balance necessary regulation with free trade, and participants felt it was particularly urgent that governments at all levels join in adopting a uniform and consistent approach to regulation. Many complained that the need to comply with the varying requirements of multiple jurisdictions impedes the efficient movement of goods. Several urged that IMO standards be the model for the U.S. at the national and state levels.

The desirability of international cooperation in support of free trade was the theme of many comments, such as “take dramatic steps to ensure the world that we are a player . . .”; “view the world as a good place with many potential partners rather than a bad place loaded with enemies, then act that way”; and “support international institutions that underpin global trade by being willing to work within those institutions and accept outcomes that sometimes do not go our way.” Conversely, participants were unanimous in decrying protectionism.

In the same vein, participants overwhelmingly supported the U.S. becoming a party to the 1982 UN Convention on the Law of the Sea (UNCLOS). One commented that this is “essential” in order to “get a seat at the table” as the Arctic opens.

Participants again called for investment in infrastructure, with one advocating a blend of public and private investment, including foreign. There were also calls for a national energy policy, though participants differed as to whether it should focus on achieving U.S. energy independence or on global interdependence.

ROLE OF THE MARITIME SERVICES

In keeping with Dean Rubel’s opening statement on the goals of the conference, the final exercise sought participants’ views on the role and value of the maritime services—Navy, Marine Corps, Coast Guard and Merchant Marine—in assuring a positive future for the shipping industry. Participants again used the WebIQ® collaborative software to enter ideas, then discussed key themes emerging from the entries.

In commenting on the role and value of the Navy, participants' primary focus was on its traditional role of keeping the sea lanes open for commerce. Toward this end, they offered a number of specific recommendations:

- Maintain the capability to counter potential challenges from peer competitors. One participant noted that while Russia is “flexing its muscles in the Arctic,” the U.S. Navy has no ice-capable surface vessels. At the same time, the Navy should continue formal and informal military-to-military contacts with potential adversaries, including Russia and China.
- Cooperate with regional and global partners to combat piracy, including monitoring and reporting pirate activity and pursuing and prosecuting those responsible. Several participants stressed the importance of information sharing between the defense community and the private sector, which in the words of one participant, “has eyes and ears in ports around the world.” Participants noted that this cooperation has been increasing, although information from industry should complement, not replace, that collected through official channels. One called for close cooperation between the Navy and the Justice Department to enhance prosecution of potential piracy cases.
- Improve counter-mine capabilities. Participants expressed particular concern over the threat of mines and what they perceived as an inadequate Navy capability to deal with it. They considered mines a particular threat to shipping because they are widely available, easily deployed, and difficult to detect and remove. They noted that even the threat of mines is sufficient to disrupt commerce.

Participants had less to say about the role of the Marine Corps in relation to commercial shipping, but several suggested the Corps could help counter piracy by conducting operations in Somalia and providing a global “rapid response” to vessel security incidents.

In addressing the Coast Guard's value to commercial shipping, a number of participants returned to the issue of regulation, particularly the need to standardize requirements among jurisdictions. They urged the Coast Guard to be assertive in confronting states whose regulations are inconsistent with those at the national level and burdensome to shippers. They acknowledged that the responsibility for drafting statutes lies with Congress, but one noted that the Coast Guard has worked successfully with the Department of Justice to win cases against states under the preemption doctrine. On a related issue, a participant called upon the Coast Guard to press state and port authorities to recognize the Transportation Worker Identification Credential as the standard identification document and not impose additional requirements of their own.

Several comments addressed the dynamics of Coast Guard dealings with other parties. One affirmed that the Coast Guard “must be the lead agency (not TSA) in all maritime security and defense issues, but needs to act like a partner, not like the police.” Another offered similar advice: “Work cooperatively with the maritime industry, rather than as a cop on the beat.” Some participants also called for better treatment of mariners sailing to U.S. ports.

Finally, participants called for more resources to be made available to the Coast Guard in order for it to perform its missions. As one put it, “They are doing more than should be expected with the current resourcing but will soon be underfunded to provide for the increased demands ahead.” A participant cited the lack





of Arctic ice breakers as an example of the need to fund Coast Guard capabilities to address new requirements.

In considering the role and value of the Merchant Marine, participants took care to distinguish between the U.S. Merchant Marine and global merchant shipping. They noted that the former has become primarily a DOD resource whose principal role is to ensure the availability of sufficient vessels and trained U.S. crews to deliver military cargos wherever needed, and they stressed the need to continue investing sufficiently in U.S.-flagged ships and crews to maintain that capability. One participant noted that Merchant Marine officers who were also Navy reservists could be used to “interface” between merchant vessels and those of the Navy and Coast Guard. On a more general level, participants from the military services and the private sector stressed the need for both sides to maintain an ongoing dialogue to better understand each other’s needs and capabilities.

While focusing on the role of the U.S. Merchant Marine in providing military sea-lift, several participants also noted the desirability of increasing short sea shipping as a way to alleviate environmental and other problems resulting from the heavy volume of trucking on U.S. highways. They noted domestic waterborne commerce has shown no growth over the past decade. One participant cited a recent report on this issue prepared by the Institute for Global Maritime Studies and the Fletcher School of Law and Diplomacy, available at <http://www.igms.org/>.

Participants also discussed the role of the U.S. Maritime Administration (MARAD). Some envisioned the Maritime Administrator as the “head” of the U.S. Merchant Marine in the same way the Chief of Naval Operations and the Commandants of the Coast Guard and Marine Corps are the heads of their respective services, and one suggested the Administrator should have signed the new Maritime Strategy along with the chiefs of those services. There was also a suggestion that MARAD play the same role in maritime activities as the Federal Aviation Administration does in aviation, with commensurate funding and support from the Department of Transportation.

While addressing most of their comments to the U.S. Merchant Marine, participants also noted the essential role of the international merchant fleet in globalization and in providing the U.S. with energy supplies and other critical imports. They stressed the importance of cooperating closely with the international shipping community, and several urged that the U.S. partner with other nations in recruiting, training and retaining mariners for the global fleet and related shoreside jobs. They noted the U.S. Merchant Marine Academy has an important role to play in that process.

In discussing the role of each of the maritime services, participants reiterated the need for them to make clear to the U.S. Congress their strong support for U.S. accession to UNCLOS.

LESSONS LEARNED

To conclude the day's discussion, participants were asked to offer one comment each on what they considered to be the most important lesson learned. For the sake of brevity, they were asked to imagine themselves sharing an elevator with an influential leader of their choice and to use the 30-second ride to convey the message they thought most important for the future of the maritime industries.

Many comments focused on policy issues raised during the day's discussions, including:

- The need to promote investment in ports and intermodal capacity and to develop a national infrastructure strategy for the U.S.;
- The need for security to be a cooperative effort at all levels—state, national and global;
- The need for information sharing “across the board”—military, non-government organizations (NGOs) and commercial—in the interest of maritime security;
- The need to take the importance of promoting trade into account when considering regulatory solutions to environmental and security problems;
- The need for U.S. national standards to be consistent with international standards and for international standards to incorporate U.S. initiatives;
- The need to press for Senate action on U.S. accession to UNCLOS, one participant noting that accession would “promote national security by locking in the navigational provisions as treaty law, permit the U.S. to claim an extended continental shelf beyond 200 miles, and enable the U.S. to retain its natural global leadership position in ocean policy affairs.”

Notwithstanding the high importance participants attached to each of the preceding points, by far the greatest number of comments focused on the need to maintain a dialogue between industry and government. Statements concerning this need included the following:



The government and the commercial sector share an understanding of the importance of global trade but have different understandings of what might threaten it. More education of government is needed.

[The] Navy and Coast Guard need to better understand (e.g., structure and drivers), partner with, and seek guidance/input from the global commercial maritime industry (private sector, academia, government) if we are to be successful in implementing the maritime strategy—particularly in areas of maritime security, disaster recovery, and MDA [Maritime Domain Awareness].

We are all sailors on common oceans facing common issues. Continued open dialog amongst us remains the best path to finding common solutions.

Several participants cited the value of conferences like this, and one suggested conducting a more protracted “war game” to explore issues in greater depth, a proposal Dean Rubel voiced in his concluding remarks. There were also recommendations concerning organizations not at this conference who should be included in the future: the CBP, the IMO, the MARAD Office of Security, the Senate Commerce Committee, the House Transportation and Infrastructure Committee, and other Congressional committees concerned with maritime issues.⁶ One participant suggested establishing a congressionally mandated permanent advisory body, like the Advisory Committee on Commercial Operations of Customs and Border Protection and Related Homeland Security Functions [COAC] that advises CBP on commercial matters.

Finally, participants cited the need for a broader effort to inform the general public of the critical role played by commercial shipping, “the lifeblood of global trade.” With the U.S. Presidential election days away, one offered the following advice to the victor: “Maritime issues are complicated and often get politicized, and they [will] require global cooperation and nuanced attention from the new administration.”



⁶ Given the frequency with which labor issues were mentioned during the conference, the moderator and author of this report recommends labor organizations be represented as well.

ACRONYMS

10+2	Proposed new U.S. Customs requirements for additional information to be provided by shippers prior to loading containers for shipment to the U.S.
AEO	Authorized Economic Operator
AIS	Automatic Identification System
ATS	Automated Targeting System
BRIC	Brazil, Russia, India, China
CBP	U.S. Customs and Border Protection
CNWS	Center for Naval Warfare Studies
COAC	Advisory Committee on Commercial Operations of Customs and Border Protection and Related Homeland Security Functions
CSI	Container Security Initiative
C-TPAT	Customs-Trade Partnership Against Terrorism
CY	Container Yard
DHS	Department of Homeland Security
DNDO	Domestic Nuclear Detection Office
DOD	U.S. Department of Defense
DOHA	Defense Office of Hearings and Appeals
FMSC	Federal Maritime Security Coordinator
FSPO	Floating Production Storage and Offloading Vessel (off-shore oil extraction)
GDP	Gross domestic product
GMP	Global Maritime Partnership
GOA	Gulf of Aden
HARTS	Harbour Craft Transponder System (Singapore)
HMT	Hazard Mitigation Team
	Hazardous Materials Table
HSPD	Homeland Security Presidential Directive
ICS	Incident Command System
ILA	International Longshoremen's Association
ILWU	International Longshore and Warehouse Union
IMO	International Maritime Organization
IPCC	Intergovernmental Panel on Climate Change
ISPS	International Ship and Port Security
LA/LB	Port of Los Angeles/Long Beach
LRAD	Long Range Acoustic Device
MARAD	Maritime Administration (U.S. Department of Transportation)
MDA	Maritime Domain Awareness
MTS	Marine Transportation System
NGO	Non-government organization
NIC	National Intelligence Council
NIMS	National Incident Management System
NSPD	National Security Presidential Directive
OECD	Organization for Economic Cooperation and Development
RFID	Radio Frequency Identification
RMB	Renminbi (currency of People's Republic of China)
RPG	Rocket propelled grenade
RPM	Radiation portal monitors
SAFE	Security and Accountability for Every Port Act—more commonly referred to as the “SAFE Port” Act

ACRONYMS, CONT'D

SFI	Secure Freight Initiative
SUA	Suppression of Unlawful Acts (against the safety of maritime navigation)
TEU	Twenty-foot equivalent unit
TITLE XI	Bankruptcy Chapter of U.S. code
TREC	Tamper-resistant embedded control device
TSA	Transportation Security Administration
TWIC	Transportation Worker Identification Credential
UNCLOS	1982 United Nations Convention on the Law of the Sea
USEC	United States East Coast
USWC	United States West Coast
WCO	World Customs Organization
WMD	Weapon of mass destruction





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